

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended) A photoelectric conversion element, comprising:  
an electrode substrate, which includes:
  - a base material;
  - a transparent conductive layer which is provided on the base material; and
  - a metal circuit layer which is formed on the transparent conductive layer,  
wherein the metal circuit layer is covered by an insulating layer;an oxide semiconductor porous film provided on a side of the electrode substrate where the transparent conductive layer is provided;
  - a sensitizing dye provided in the oxide semiconductor porous film;
  - a counter electrode, which has a different constitution from the electrode substrate and which is placed facing the oxide semiconductor porous film; and
  - an electrolyte layer or charge transfer layer, which is provided between the counter electrode and the electrode substrate above which the oxide semiconductor porous film is formed, wherein
    - the transparent conductive layer contacts the metal circuit layer inside of the insulating layer and the transparent conductive layer physically contacts an electrolyte solution via the oxide semiconductor porous film and at least a part of the oxide semiconductor porous film directly contacts the transparent conductive layer outside of the insulating layer.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appln. No. 10/529,818 (Q87174)**

2-5. (cancelled).

6. (currently amended) A dye-sensitized solar cell comprising:

an electrode substrate, which includes:

a base material;

a transparent conductive layer which is provided on the base material; and

a metal circuit layer which is formed on the transparent conductive layer,

wherein the metal circuit layer is covered by an insulating layer,

an oxide semiconductor porous film provided on a side of the electrode substrate where the transparent conductive layer is provided;

a sensitizing dye provided in the oxide semiconductor porous film;

a counter electrode, which has a different constitution from the electrode substrate and which is placed facing the oxide semiconductor porous film; and

an electrolyte layer or charge transfer layer, which is provided between the counter electrode and the electrode substrate above which the oxide semiconductor porous film is formed, wherein

the transparent conductive layer contacts the metal circuit layer inside of the insulating layer and the transparent conductive layer physically contacts an electrolyte solution via the oxide semiconductor porous film and at least a part of the oxide semiconductor porous film directly contacts the transparent conductive layer outside of the insulating layer.

7-26. (cancelled).

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appl. No. 10/529,818 (Q87174)**

27. (currently amended) A photoelectric conversion element, comprising:

- an electrode substrate, which includes:
  - a base material;
  - a transparent conductive layer which is provided on the base material; and
  - a metal circuit layer which is formed on the transparent conductive layer,
- wherein the metal circuit layer is covered and insulated by an insulating layer

which includes a heat-resistant ceramic as a main component,

- an oxide semiconductor porous film provided on a side of the electrode substrate where the transparent conductive layer is provided;
- a sensitizing dye provided in the oxide semiconductor porous film;
- a counter electrode, which has a different constitution from the electrode substrate and which is placed facing the oxide semiconductor porous film; and
- an electrolyte layer or charge transfer layer, which is provided between the counter electrode and the electrode substrate above which the oxide semiconductor porous film is formed, wherein

- the transparent conductive layer contacts the metal circuit layer inside of the insulating layer and the transparent conductive layer physically contacts an electrolyte solution via the oxide semiconductor porous film and at least a part of the oxide semiconductor porous film directly contacts the transparent conductive layer outside of the insulating layer.

28-33. (cancelled).

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appl. No. 10/529,818 (Q87174)**

34. (currently amended) A dye-sensitized solar cell comprising:  
an electrode substrate, which includes:  
a base material;  
a transparent conductive layer which is provided on the base material; and  
a metal circuit layer which is formed on the transparent conductive layer,  
wherein the metal circuit layer is covered and insulated by an insulating layer  
which includes a heat-resistant ceramic as a main component,  
an oxide semiconductor porous film provided on a side of the electrode substrate where  
the transparent conductive layer is provided;  
a sensitizing dye provided in the oxide semiconductor porous film;  
a counter electrode, which has a different constitution from the electrode substrate and  
which is placed facing the oxide semiconductor porous film; and  
an electrolyte layer or charge transfer layer, which is provided between the counter  
electrode and the electrode substrate above which the oxide semiconductor porous film is  
formed, wherein  
the transparent conductive layer contacts the metal circuit layer inside of the insulating  
layer and the transparent conductive layer physically contacts an electrolyte solution via the  
oxide semiconductor porous film and at least a part of the oxide semiconductor porous film  
directly contacts the transparent conductive layer outside of the insulating layer.

35. (new) The photoelectric conversion element according to Claim 1, wherein the  
counter electrode is not provided with a metal circuit layer.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appl. No. 10/529,818 (Q87174)**

36. (new) The photoelectric conversion element according to Claim 35, wherein the counter electrode is provided directly onto the electrolyte layer or charge transfer layer.

37. (new) The photoelectric conversion element according to Claim 36, wherein the insulating layer comprises a material that includes a glass component.

38. (new) The dye-sensitized solar cell according to Claim 6, wherein the counter electrode is not provided with a metal circuit layer.

39. (new) The photoelectric conversion element according to Claim 38, wherein the counter electrode is provided directly onto the electrolyte layer or charge transfer layer.

40. (new) The dye-sensitized solar cell according to Claim 27, wherein the counter electrode is not provided with a metal circuit layer.

41. (new) The photoelectric conversion element according to Claim 40, wherein the counter electrode is provided directly onto the electrolyte layer or charge transfer layer.

42. (new) The photoelectric conversion element according to Claim 41, wherein the heat-resistant ceramic contains at least one of alumina, zirconia, and silica.

43. (new) The photoelectric conversion element according to Claim 41, wherein the insulating layer contains at least one of silicate, colloidal silica, alkyl silicate, and metal alkoxide.

**AMENDMENT UNDER 37 C.F.R. § 1.111**  
**U.S. Appl. No. 10/529,818 (Q87174)**

44. (new) The dye-sensitized solar cell according to Claim 34, wherein the counter electrode is not provided with a metal circuit layer.

45. (new) The photoelectric conversion element according to Claim 44, wherein the counter electrode is provided directly onto the electrolyte layer or charge transfer layer.